

Specifically, as described on page 7, lines 1-16 of Yang et al. (translation), the following 8 species of insects are inoculated with *Cordyceps nutans*:

- 1) cabbage-white butterfly, *Pieris rapae*,
- 2) diamondback moth, *Plutella xylostella*,
- 3) armyworm moth, *Pseudaletia separata*,
- 4) grasshoppers, (Acrididae),
- 5) alder-leaf beetles, *Agelastica coerulea*,
- 6) aphids (Aphididae),
- 7) stinkbug (Pentatomidae), and
- 8) pine-tree sawflies, *Acantholyda postcalis*.

For inoculation of insect species of (1) through (6), the insects are sprinkled with conidia of *Cordyceps nutans* while they are on host plants. The insect of (7) is placed on conidia formed on a culture medium so that as it crawls around, and the conidia formed on the agar medium are attached to the insect, covering its body surface. The insect of (8) is buried in conidia-mixed soil in a container.

It is apparent from the description on page 20, lines 10-18 of Yang et al. that the inocula used by the authors are conidia.

Thus, Yang et al., who use conidia as inocula and infect the insects by bringing them into contact with conidia, mention nothing in their article about the use of hyphal bodies or inoculation by injection. Accordingly, Applicants submit that the claimed invention is not anticipated (or suggested) by the teaching of Yang et al.

Misunderstanding by the Examiner

1) On page 4, lines 4-5 of the Office Action, the Examiner states that “Yang et al. teach spawned insects (e.g. stinkbugs) that are hosts for the entomopathogenic fungus, *Cordyceps nutans* (page 20).” However, Yang et al. do not inject hyphal bodies; rather, they percutaneously

inoculate conidia, which is a technique different from the method of the present application. What is referred to as "spawned insect" in the present application is insects injected with hyphal bodies.

2) The Examiner appears to be of the opinion, based on her description of page 5 of Yang et al. concerning insects from which hyphae are removed, that the infected insects of Yang et al. are equivalent to the spawned insects defined in the instant invention. However, in this part of their article, Yang et al. merely describe a procedure for separating hyphae from field-collected entomopathogenic fungus samples. The infected insects described here are not artificially infected by inoculation, but rather are naturally infected insects. Thus, the phrase "(e.g., spawned insects)" on page 4, line 7 of the Office Action is incorrect.

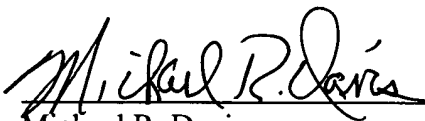
3) In general, insect bodies invaded by entomopathogenic fungi are filled with hyphae.

For the reasons set forth above, Applicants take the position that the subject matter of claim 4 is patentable over the Yang et al. reference.

Therefore, in view of the foregoing remarks, it is submitted that the ground of rejection set forth by the Examiner has been overcome, and that the application is in condition for allowance. Such allowance is solicited.

Respectfully submitted,

Hiroki SATO et al.

By: 
Michael R. Davis
Registration No. 25,134
Attorney for Applicants

MRD/pth
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
July 21, 2005